IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A method for the production of a monolithic multilayer actuator ~~made of~~ comprising a piezoceramic or electrostrictive material, with the actuator being formed as a stack arrangement in a quasi mechanical series connection of a plurality of piezoplates by sintering of green foils, existing inner electrodes in the plate stack being routed to opposite outer surfaces of the stack, where they are connected in parallel by a basic metallic coating as well as an external contact of respective electrode groups, wherein

~~characterised in that~~

specific microdisturbances are incorporated in the actuator structure along the longitudinal axis of the stack essentially parallel and spaced to the inner electrodes in the area of the at least two opposite outer surfaces to which the inner electrodes known per se are brought out, which at the earliest during polarisation of the actuator are subject to a pregiven, limited, stress-reducing growth into the interior of the actuator and wherein additionally the basic metallic coating and/or the external contact is formed elongation-resistant or elastic at least in the area of the microdisturbances.

Claim 2 (Currently Amended): The method according to Claim 1, ~~characterised in that~~ wherein

the microdisturbances prevent locally limited that the green foils are sintered together.

Claim 3 (Currently Amended): The method according to Claim 2, ~~characterised in that~~ wherein

a layer or quantity of an organic binder is applied during build-up of the stack in the area of the microdisturbances, with up to 50% by volume of organic particles with a diameter ≤ 200 nm which during the sintering process burn off nearly completely.

Claim 4 (Currently Amended): The method according to Claim 3, ~~characterised in that~~ wherein

the layer is applied by means of screen printing, with this layer being compacted prior to sintering in such a manner that the ceramic particles embedded in the green foils contact each other only partially or not at all in order to explicitly prevent a complete or partial sintering together.

Claim 5 (Currently Amended): The method according to Claim 2, ~~characterised in that~~ wherein

microdisturbances are formed by a quantity of inorganic filler particles with a diameter of ≤ 1 μm which do not react with the piezoelectric material of the stack, with these filler particles being added to the binder.

Claim 6 (Currently Amended): The method according to Claim 2, ~~characterised in that~~ wherein

the microdisturbances are induced by incipient notches, which are generated either in the green or in the sintered condition, without, however, reducing the load bearing cross-sectional area of the actuator stack.

Claim 7 (Currently Amended): The method according to ~~one of the previous claims, characterised in that~~ Claim 1, wherein

the external contact is prepared with the knowledge of the position of the incorporated or intended microdisturbances, with the external contact comprising a plane bending articulated electrode which is punctually or with portions in electrical connection with the basic metallic coating at least in the area of the microdisturbances.

Claim 8 (Currently Amended): The method according to Claim 7, ~~characterised in that~~ wherein

the bending electrode consists of a soldered copper/beryllium strip and the strip comprises sections in the shape of open ellipses, with main axis of the respective open ellipsis extending in the area of one of the microdisturbances.

Claim 9 (Currently Amended): The method according to Claim 7, ~~characterised in that~~ wherein

the bending electrode is designed as meander or double meander electrode, with the connecting portions of the meander extending in the area of the microdisturbances.

Claim 10 (Currently Amended): The method according to ~~one of Claims 7 to 9, characterised in that~~ Claim 7, wherein

soldering portions or soldering pads are provided on the bending electrodes for further wiring.

Claim 11 (Currently Amended): The method according to ~~one of the previous claims, characterised in that~~ Claim 1, wherein

electrode-free passive end layers as force coupling surfaces are applied on the stack arrangement.

Claim 12 (Currently Amended): The method according to Claim 11, ~~characterised in that~~ wherein

the distance of the first microdisturbance to the passive end layer is selected to equal the total or half the distance of the remaining microdisturbances distributed over the longitudinal axis.

Claim 13 (Currently Amended): A monolithic multilayer actuator ~~made of~~ comprising a piezoceramic or electrostrictive material, with the actuator being a stack arrangement of piezoplates, which is provided with inner electrodes, a common basic metallic coating as well as an external contact, ~~characterised in that~~ wherein

delaminating microstructure disturbances are provided along the longitudinal axis of the stack essentially parallel to the inner electrodes, which reduce the tensile strength relative to the surrounding structure while simultaneously maintaining the compression strength of the stack.

Claim 14 (Currently Amended): The monolithic multilayer actuator according to Claim 13, ~~characterised by~~ comprising an elongation-resistant plane outer electrode which is connected only punctually with the basic metallic coating in the area between the delaminating microdisturbances.

Claim 15 (Currently Amended): The monolithic multilayer actuator according to Claim 14, ~~characterised in that~~ wherein

the outer electrode is a plane structured copper/beryllium strip.

Claim 16 (Currently Amended): The monolithic multilayer actuator according to Claim 14, ~~characterised in that~~ wherein

the outer electrode comprises the shape of a meander or a double meander with bending articulation function.

Claim 17 (Currently Amended): The monolithic multilayer actuator according to Claim 14, ~~characterised in that~~ wherein

the outer electrode comprises the shape of a series of open ellipses with bending articulation function, with a connecting and contacting web between the ellipses extending essentially in the direction of the minor axes.

Claim 18 (Currently Amended): The monolithic multilayer actuator according to Claim 17, ~~characterised in that~~ wherein

the main axis of the respective open ellipsis of the outer electrode essentially extends in the area of the mircrostructure disturbances.

Claim 19 (Currently Amended): The monolithic multilayer actuator according to ~~one of Claims 13 to 18, characterised in that~~ Claim 13, wherein

electrode-free passive end layers are formed at the upper and/or lower end of the actuator.

Claim 20 (Currently Amended): The monolithic multilayer actuator according to Claim 19, ~~characterised in that~~ wherein

the passive end layers comprise a monolithic insulating layer which carries or accommodates coupling elements.

Claim 21 (Currently Amended): An electrical external contact for a monolithic multilayer actuator ~~made of~~ comprising a piezoceramic or electrostrictive material, with the actuator comprising a stack arrangement of piezoplates with inner electrodes and a basic metallic coating, ~~characterised in that~~ wherein

the outer electrode comprises an elongation-resistant metallic strip which is only punctually connected with the basis metallic coating and which has a plurality of individual bending articulations arranged in one plane.

Claim 22 (Currently Amended): The electrical external contact according to Claim 21, ~~characterised in that~~ wherein

the strip consists of a copper/beryllium alloy.

Claim 23 (Currently Amended): The electrical external contact according to Claim 21 ~~or 22, characterised in that~~ wherein

the strip comprises the shape of a meander or a double meander.

Claim 24 (Currently Amended): The electrical external contact according to Claim 21 ~~or 22, characterised in that~~ wherein

the strip consists of a series of open ellipses connected by webs, with the contact being preferably effected in the area of the webs.